DERWENT-ACC-NO: 1998-159735

DERWENT-WEEK: 199830

TITLE: **Alarm** activating system for preventing driver from falling asleep - has sensing device, which is elastic tube mounted on driving wheel and switch is adjustable **air** device connected to elastic tube

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PATENT-ASSIGNEE: ARAM D[ARAMI]

PRIORITY-DATA: 1996US-0689801 (August 14, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9807126 A1	February 19, 1998	E	010	G08B 023/00
AU 9737820 A	March 6, 1998	N/A	000	G08B 023/00

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PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
WO 9807126A1	N/A	1997WO-IL00274	August 13, 1997
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AU 9737820A	Based on	WO 9807126	N/A

INT-CL (IPC): G08B023/00

ABSTRACTED-PUB-NO: WO 9807126A

BASIC-ABSTRACT:

The system comprises a sensing device that is mounted on a **steering wheel** of a car and is sensitive to a grip of driver's hand on the wheel. The sensing device is connected to a switch, which would activate an alarm. The sensing device is an elastic tube mounted on the driving wheel. The switch is an adjustable air switch connected to the elastic tube.

The alarm is an independent audio device and the system is connected it.

USE - For activating alarm to prevent drivers from falling asleep or slumber due to fatigue, stress, exposure to long monotonous engine noise, heat etc.

ADVANTAGE - Allows sensing driver's awareness, emit sound which would alarm and wake driver. It is automatically activated.

CHOSEN-DRAWING: Dwg.2/4

TITLE-TERMS: **ALARM** ACTIVATE SYSTEM PREVENT DRIVE FALL **SLEEP** SENSE DEVICE
ELASTIC TUBE MOUNT DRIVE WHEEL SWITCH ADJUST **AIR** DEVICE CONNECT
ELASTIC TUBE

DERWENT-CLASS: S02 W05 X22

EPI-CODES: S02-F03A; W05-A02; X22-E04;

SECONDARY-ACC-NO:
Non-CPI Secondary Accession Numbers: N1998-126892

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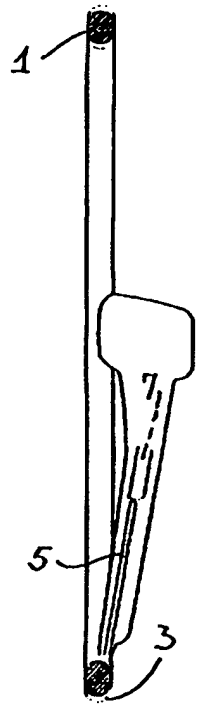
(54) Title: MEANS FOR PREVENTING A DRIVER FROM FALLING ASLEEP

(57) Abstract

The invention relates to a system and device for alerting drivers who fall asleep while driving. The system and device would automatically be activated when they sense that the driver is in a state of falling asleep or slumbering. The sensing means (3) would be mounted on the steering wheel (1) and would be sensitive to the driver's grip of the steering wheel (1).



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MEANS FOR PREVENTING A DRIVER FROM FALLING ASLEEP

FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to means which would prevent a driver from falling asleep while driving.

Many factors, such as fatigue, stress, long continuous driving, exposure to long monotonous engine, heat and the like cause that drivers fall asleep or slumber during driving. Furthermore the "reaction-time" of drivers in such a situation is prolonged, thus raising the chances of their being involved in accidents, collisions and the like.

OBJECTS OF THE INVENTION

It is thus the object of the present invention to provide a system which will sense the driver's awareness, emit a sound which would alarm and wake the driver. It is important that the device be automatically activated.

It is thus a further object of the present invention to present an automatic system.

SUMMARY OF INVENTION

According to the invention there is provided a system and a device which would automatically be activated when it senses that the driver is in a state of falling asleep or is slumbering. The device would alert the driver by activating an acoustic signal or activating the car's radio very loudly or any other similar means.

The system comprises a sensing means mounted on the steering wheel and being sensitive to the grip of the driver's hand on the wheel when the hand grip would be even slightly loosened the alarm would be activated. The power supply activating the alarm could be an independent battery or it could be connected to the car's electrical system.

SHORT DESCRIPTION OF THE DRAWINGS

The invention will now be described with reference to the annexed drawings in which:

Figure 1 is a schematic top view of a steering wheel, being part of the system.

Figure 2 is a cross section of the wheel of Figure 1.

Figure 3 shows schematically the sensing means, while

Figures 4a and **4b** depict examples of the activating switch.

DESCRIPTION OF PREFERRED EMBODIMENT

Turning to **Figures 1** and **2** a steering wheel **1** is provided with a circumference elastic tube 3 being branched off by section 5 at the free end of which there is provided an adjustable low pressure air switch **7** (see **Figure 3**).

Air switch **7** is connected to air tube **5** in its "open" position (**Figure 4b**). As long as the steering wheel is held firmly by the driver the said air switch would remain in its "open" position. Once the hand grip of the driver is loosened, the air switch would close and establish contact between terminals **10** and **11** which close on electric circuit of any alarm system or any other audible means of generally known type.

By means of adjusting screw **12** the sensitivity of the air switch could be changed.

It is quite obvious that the alarm could also be adjusted.

CLAIMS

1. A system for activating an alarm to prevent drivers from falling asleep or slumber which comprises sensing means being mounted on the steering wheel of a car and being sensitive to the grip of the driver's hand on the wheel said sensing means being connected to a switch which would activate an alarm.

2. A system as claimed in claim 1, wherein said sensing means is an elastic tube mounted on the driving wheel.

3. A system as claimed in claim 1 for activating an alarm to prevent drivers from falling asleep or slumber, where said switch is an air switch connected to said elastic tube.

4. A system as claimed in claim 1, wherein said alarm is an independent audio means.

5. A system as claimed in claim 1, wherein the system is connected to the car's audible devices.

6. A system as claimed in claim 1, wherein said air switch is adjustable.

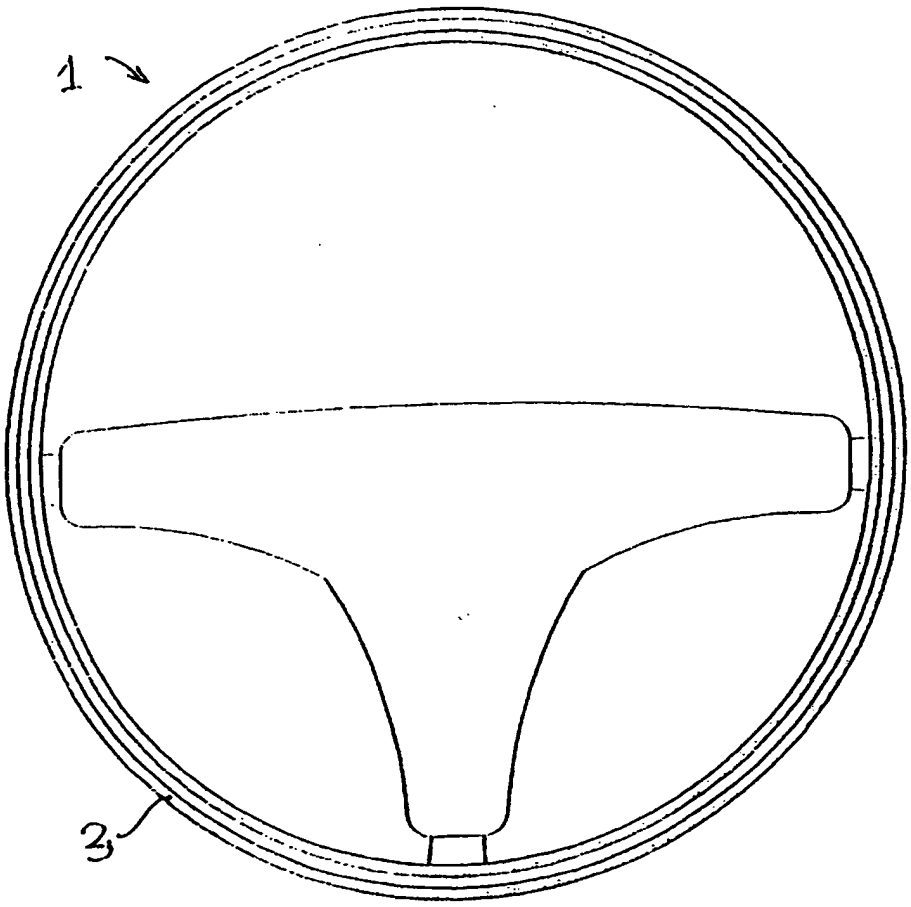

FIG. 1

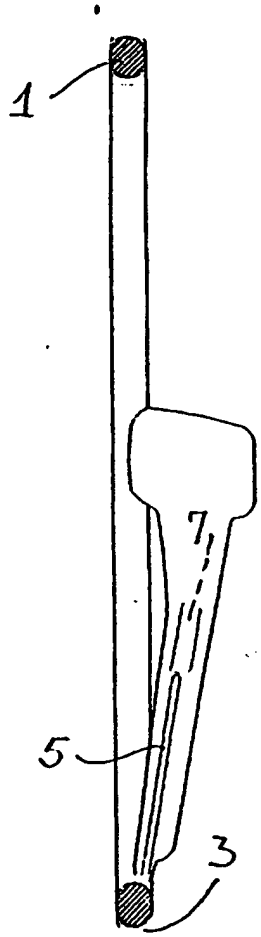

FIG. 2

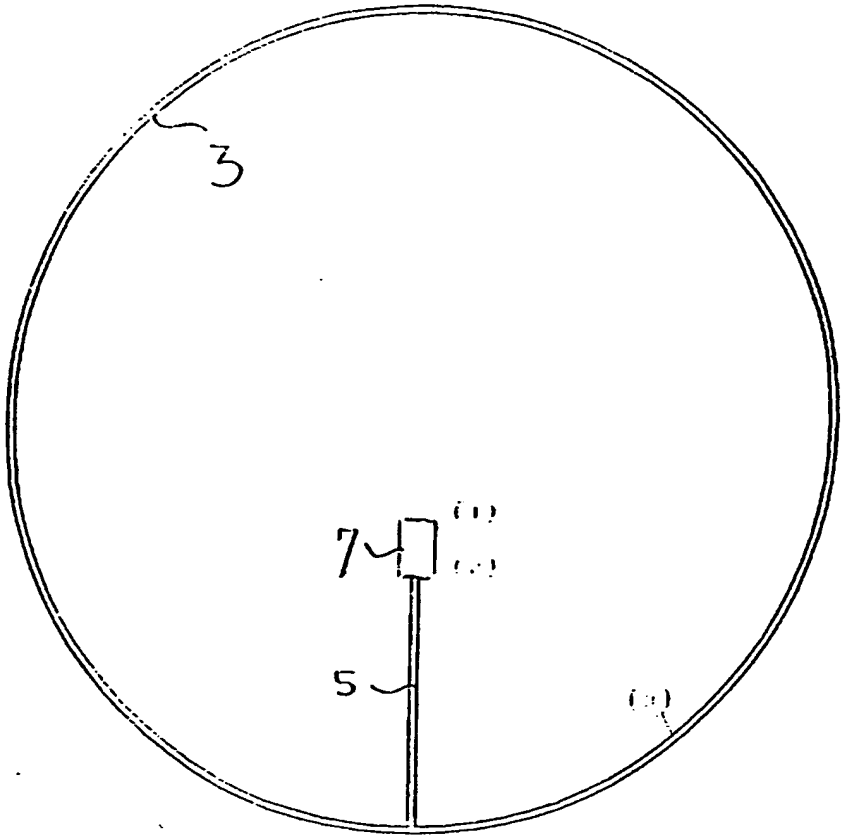

FIG. 3

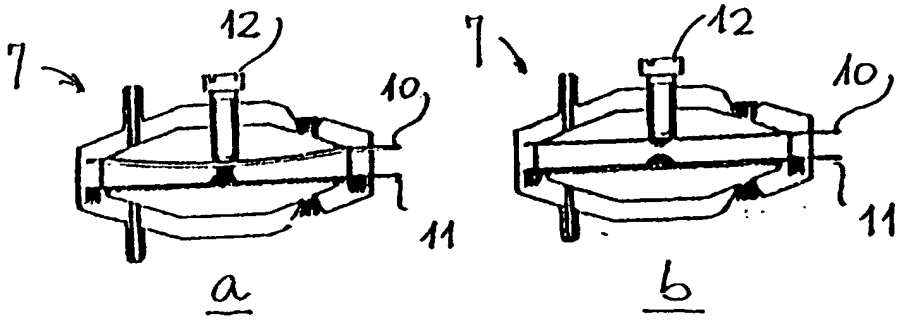

FIG. 4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL97/00274

A. CLASSIFICATION OF SUBJECT MATTER
IPC(6) :G08B 23/00
US CL :340/576, 575
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 340/576, 575; 180/272

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,540,979 A (GERGER et al.) 10 September 1985, whole document.	1-4 --- 5
X --- Y	US 3,585,626 A (TARTARINI) 15 June 1971, whole document.	1-4, 6 --- 5

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL97/00274

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The invention relates to a system and device for altering drivers who fall asleep while driving. The system and device would automatically be activated when it senses that the driver is in a state of falling asleep or slumbering. The sensing means (3) would be mounted on the steering wheel (1) and would be sensitive to the driver's grip of the steering wheel (1).